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10/562,444

12/27/2005

Masashi Date

2005-2009A

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SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

06/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,444

Applicant(s)

DATE ET AL.

Examiner

Chukwuma O. Nwaonicha

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claims 1-6 are pending in the application.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-3 are rejected because of the parenthesis in claim 1, and parenthesis are considered indefinite. Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al., {JP 06345726, See Abstract}.

Takahashi et al. disclose applicants claimed cationic polymerization initiators. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step. See cationic polymerization initiators in the abstract, and MPEP 2113.

Claims 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Abe et al., {JP 09012615, See Abstract}.

Abe et al. disclose applicants claimed cationic polymerization initiators, the composition and the cured product. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step. See cationic polymerization initiators in the abstract, and MPEP 2113.

Claims 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al., {JP 08325225, See Abstract}.

Takahashi et al. disclose applicants claimed cationic polymerization initiators (a monosulfonium salt), the composition and the cured product. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step. See cationic polymerization initiators in the abstract, and MPEP 2113.

Claims 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Abe et al., {US 5,789,395}.

Abe et al. disclose applicants claimed cationic polymerization initiators, the composition and the cured product. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the

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process step. See cationic polymerization initiators on columns 2-4 and 9-12, and MPEP 2113.

Claims 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Akhtar et al., {New synthesis of aryl-substituted sulfonium salts and their applications in photoinitiated cationic polymerization, Chemistry of Materials (1990), 2(6), 732-737}.

Akhtar et al. disclose applicants claimed cationic polymerization initiators. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step. See cationic polymerization initiators in the abstract, and MPEP 2113.

Allowable Subject Matter

Claims 1-3 are objected but would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Reason For Allowance

The following is an examiner's statement of reasons for allowance: A search of the prior art failed to uncover any reference that anticipates or renders obvious a method of producing cationic polymerization initiators (a monosulfonium salt) as claimed by applicants.

The closest prior arts are Akhtar et al., {New synthesis of aryl-substituted sulfonium salts and their applications in photoinitiated cationic polymerization, Chemistry of Materials (1990), 2(6), 732-737} and Abe et al., {JP 08325225, See Abstract}. Akhtar et al. teach the method of making catalysts for photochemical

polymerization by reacting dialkyl and diaryl sulfoxides with aromatic compounds in the presence of $P_2O_5/MeSO_3H$.

On the other hand, Abe et al. teach a process of preparing a sulfonium salts useful as cationic photopolymerization initiators by reacting diaryl sulfoxides with aryl alkyl (thio)ethers or polyaryl sulfides in the presence of polyphosphoric acid, followed by reacting the resulting sulfonium complexes with hexafluoro alkali metal salts. Thus, Ph_2SO and Ph_2S were heated with A at 120° for 5 h, then reacted with KPF₆ in H₂O for 1 h to give 90% (4-thiophenoxyphenyl)diphenylsulfonium hexafluorophosphate .

Applicants process for producing cationic polymerization initiators differs from the process taught by Akhtar et al. and Abe et al. in that both Akhtar et al. and Abe et al. teach away from applicants claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.


For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.
Patent Examiner
Art Unit: 1621

J. PARSA
PRIMARY EXAMINER


for

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